



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/763,844

01/23/2004

Jukka Moisander

901073.00006

8220

26710 \* 7590 02/14/2007  
QUARLES & BRADY LLP  
411 E. WISCONSIN AVENUE  
SUITE 2040  
MILWAUKEE, WI 53202-4497

EXAMINER

LUPINO, GINA M

ART UNIT

PAPER NUMBER

3652

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

02/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/763,844

Applicant(s)

MOISANDER ET AL.

Examiner

Gina M. Lupino

Art Unit

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**I. Claim Rejections - 35 USC § 112**

The following is a quotation from the relevant paragraphs of 35 U.S.C. 112:

(2) The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1, 4, 5, 7, 8, 11, 12, 16, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1.1. Claims 1, 4, 5, 7, 8, 11, 12, 16, and 20 all recite the limitation "a correlation", which is a relative term that renders these claim indefinite. The term "correlation" is defined as "mutual relation of two or more things, parts, etc.", however in the above-referenced claims, it is unclear which two or more features are correlated and whether they are correlated with respect to one another or other features. This term is not defined by the respective claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Therefore, further clarification is necessary.

1.2. Claims 1, 16 recite the limitation "angular position of the frames", which is a relative term that renders these claim indefinite. It is unclear whether the angular position claimed is the position between the front frame and the rear frame, or an angle formed between one of the frames of another feature. This term is not defined by the respective claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Therefore, further clarification is necessary.

**II. Claim Rejections - 35 USC § 102**

Art Unit: 3652

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by BRUUM (U.S. Patent No. 4,114,666).

1.1. With respect to claim 1 BRUUM discloses a method for controlling the position of a knuckle boom crane during movements of a forest working machine, wherein the method comprises at least the following steps:

1.1(a) driving the forest working machine, comprising a front frame 1, a rear frame 2, and a joint 3 between said frames 1, 2, allowing the swiveling of said frames 1, 2 in a lateral direction during the driving, and thereby to change an angular position of the frames, a knuckle boom crane 61 connected on the front frame to a swiveling device 7 to swivel the crane 61 around a vertical axis and thereby to change rotary position of the crane;

1.1(b) changing the position of the forest working machine during the driving in such a way that the angular position is changed;

1.1(c) and controlling said swiveling device automatically during the driving in such a way that when the angular position is changed, the rotary position is capable of being changed, where the rotary position or the change of the rotary position, is capable of being dependent on the angular position or the change of the angular position according to a predetermined correlation.

1.2. With respect to claims 2-15, BRUUM teaches the method, as discussed above, and also

- 1.2(a) With respect to claim 2, arranging the crane to lie on a bottom of a load space or a top of trunks, the rear frame 2 comprising the load space 29 for transporting the trunks.
- 1.2(b) With respect to claims 3 and 4, keeping the correlation such that a part of the crane 61 laying on the rear frame 2, or the tool 67 connected to the crane 61 and lying on the rear frame 2, is substantially stationary when the angular position is changed.
- 1.2(c) With respect to claims 5 and 6, keeping the correlation such that that a part of the crane 61 placed at a distance above the rear frame 2, or a tool 67 connected to the crane 61 and spaced at a distance above the rear frame 2, is substantially stationary when the angular position is changed.
- 1.2(d) With respect to claims 7 and 8, keeping the correlation such that the position and orientation of the crane 61, when placed above the rear frame 2, remains substantially the same with respect to the position and orientation of the rear frame 2, when the angular position is changed.
- 1.2(e) With respect to claim 9, and
- 1.2(e)(i) changing the position of the crane 61 by swiveling said swiveling device 7, the swiveling device comprising first controlled actuators 16 for producing a force effect to swivel the crane 61, and
- 1.2(e)(ii) using, a control system 14 of the forest working machine for controlling the first actuators, said correlation being set or stored in the control system, or a point of the rear frame 2, with respect to which the crane 61 is to be substantially stationary, as defined in the control system.
- 1.2(e)(iii) See Figures 1, 2, 4-7.

1.2(f) With respect to claim 10, changing the position of the forest working machine by swiveling said joint 3, said joint comprising second actuators controlled by said control system 14 and producing a force effect to swivel the frames 1, 2.

1.2(g) With respect to claim 11,

1.2(g)(i) changing the position of the crane 61 by swiveling said swiveling device 7, said swiveling device comprising first controlled actuators 16 producing a force effect to swivel the crane 61,

1.2(g)(ii) changing the position of the forest working machine by swiveling said joint 3, said joint comprising second controlled actuators producing a force effect to swivel the frames 1, 2, and

1.2(g)(iii) using a pressurized medium circuit, for controlling the first actuators, said circuit being used to couple the second actuators to the first actuators 16 in such a way that the swiveling of the joint 3 simultaneously effects the swiveling of the swiveling device 7, where a correlation is bound or can be set.

1.2(h) With respect to claim 12, transferring the crane 61, either automatically or manually 16, to a position used as a reference position, either before driving or during driving, and changing the rotary position automatically in relation to the reference position, according to the correlation.

1.2(i) With respect to claim 13, using, for the control 14 of said swiveling device, a control system 14 comprising a sensor defining the angular position.

1.2(j) With respect to claim 14, using, for the control 14 of said swiveling device, a control system 14 comprising a sensor defining the rotary position.

1.2(k) With respect to claim 15, coupling an actuator of the crane 61, the actuator taking care of lifting and lowering the crane 61, simultaneously to free floating.

1.3. With respect to claim 16, BRUUM discloses a forest working machine which comprises:

1.3(a) a front frame 1, a rear frame 2, a joint 3 between the frames 1, 2, the joint allowing the swiveling of the frames 1, 2 in a lateral direction during driving of the forest working machine and thereby to change angular position of the frames in such a way that the angular position is changed;

1.3(b) a knuckle boom crane 9 connected on the front frame 1 to a swiveling device 7 arranged to swivel the crane 9 around a vertical axis and thereby to change rotary position of the crane;

1.3(c) first actuators 16 for swiveling the swiveling device 7; and

1.3(d) a control system 14 for controlling said first actuators 16;

1.3(e) and arranged to control said swiveling device automatically during driving in such a way that when the angular position is changed, the rotary position is also changed, where the rotary position or the change in the rotary position is dependent on the angular position or the change in the angular position according to a predetermined correlation.

1.4. With respect to claims 17-23, BRUUM discloses a machine, as discussed above, and:

1.4(a) With respect to claim 17, the rear frame 2 comprises a load space 29 for trunks, and where the crane 61 or a tool 67 connected to the crane is arranged to lie on a bottom of the load space or on top of trunks in the load space.

1.4(b) With respect to claim 18, the control system 14 is arranged to keep the position and orientation of the crane 61, or a given point of the crane 61, or a tool 67 connected to

the crane 61, substantially stationary in relation to the rear frame 2, when the angular position is changed.

1.4(c) With respect to claim 19, the control system 14 is arranged to keep the position and orientation of the crane 61, or a given point of the crane 61, or a tool 67 connected to the crane 61 substantially stationary in relation to the rear frame 2, when the angular is changed.

1.4(d) With respect to claim 20, where the joint comprises second controlled actuators 4 for swiveling the joint 3, and where the control system 14 comprises a pressurized medium circuit, for coupling the first actuators, to the second actuators in such a way that swiveling of the joint simultaneously effects swiveling of the swiveling device, where the correlation is bound or can be set.

1.4(e) With respect to claim 21, where the correlation is set or stored in the control system, or a part of the rear frame 2, with respect to which the crane 61 is to be substantially stationary, is defined in the control system, or the position and orientation of the crane 61, which is to be kept substantially the same with respect to the position and orientation of the rear frame 2 when the angular position is changed, is selected in the control system.

1.4(f) With respect to claim 22, where the control system 14 comprises a sensor for defining the angular position.

1.4(g) With respect to claim 23, where the crane 61 comprises a reference position, with respect to which the rotary position is arranged to be changed, where the reference position is either a given bound position or a position in which the crane 61 is set.

### **III. Response to Applicant's Arguments**



**Applicant's arguments entered December 1, 2006 have been fully considered.**

**1. Applicant's arguments with respect to all claim objections are persuasive.**

**2. Applicant's arguments with respect to the rejection of claims 1-23 under 35 U.S.C. 102(b) are not persuasive.**

**2.1. With respect to claims 1 and 16, Applicant argues the cited references are missing features recited by independent claim 1. However, the Examiner disagrees with the Applicant.**

2.1(a) First, Applicant argues BRUUM teaches the crane arm 61 is connected to the rear vehicle frame 1, but not the front frame. However, the Examiner disagrees with the Applicant. The Examiner has construed "connected on" as "joined in contact with" or "united in contact with". See "connected" and "on". *Webster's II Dictionary, Third Edition*. Houghton Mifflin Company, 2005. Here, the crane is "connected on" the first frame because the crane is joined in contact with the first frame through the connection 4 as depicted in Figure 1. Claim 1 does not recite the nature of the way the knuckle boom crane is connected on the front frame. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

2.1(b) Second, Applicant argues BRUMM does not disclose the rotary position of the boom 9 depends on the angular position of the vehicle frames by means of a proper correlation, and being controlled automatically. However, the Examiner disagrees with the Applicant. As stated above, the claims are interpreted in light of the specification, but limitations from the specification are not read into the claims. Here, BRUUM clearly teaches boom crane 61 is capable of automatically rotating around a vertical axis and adjusting position during driving, as discussed above. BRUUM also teaches this rotational position is capable of being adjusted depending on the angular position of

the vehicle frames. Furthermore, BRUUM teaches this rotational movement is controlled automatically by a sensor based control system. The Examiner has construed "automatically" as "operating with little or no external control". See "automatically". *Webster's II Dictionary, Third Edition*. Houghton Mifflin Company, 2005. Here, the control system of BRUUM is used to move the boom with little control because it is a hard-programmed computer-based control system that automatically controls and processes data received from sensors. The little control required by this system is that of an operator putting simple commands into the computer system.

2.1(c) Third, Applicant argues BRUMM does not disclose the rotary position of the crane arm 61 depends on the angular position of the vehicle frames. However, the Examiner disagrees with the Applicant. As discussed above, the crane's position is capable of being rotated depending on the angular position of the vehicle frames. An operator may observe the vehicle frames' position and choose to move the crane based on the frames' position.

2.1(d) Thus, BRUMM teaches all the limitations of amended claim 1, as discussed above.

**2.2. With respect to claims 2 and 17, Applicant argues the cited reference is missing features recited by claims 2 and 17.** However, the Examiner disagrees with the Applicant.

2.2(a) For the reasons discussed above with respect to claims 2 and 17, BRUUM teaches all limitations recited by amended claims 2 and 17.

#### **IV. Conclusion**

1. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

2. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gina M. Lupino whose telephone number is (571) 272-6557. The examiner can normally be reached on 9:30am - 5:30pm EST.
4. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene O. Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.
5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).
6. GML

  
GENE O. CRAWFORD  
SUPERVISORY EXAMINER